12/19/97

KJB:lh 12/2/97

59-1361

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Anthony Philip Eccles

Serial No. 08/637,802

Filed: June 27, 1994

For: SILVER ALLOY COMPOSITIONS

Date: December 2, 1997

Art Unit

Examiner:

#8 Zeltz

CERTIFICATE OF MAILING

I HEREBY CERTIFY THAT THIS PAPER AND THE DOCUMENTS REFERRED TO AS BEING ATTACHED OR ENCLOSED HEREWITH ARE BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE ON 12/2/97, AS AIR MAIL IN AN ENVELOPE ADDRESSED TO: ASSISTANT COMMISSIONER FOR PATENTS WASHINGTON, D.C. 20231.

Kenneth S. Klarquist
Attorney for Applicant

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SUPPLEMENTAL TO PROTEST UNDER 37 C.F.R. § 1.291(a)
FILED DECEMBER 1, 1997

ASSISTANT COMMISSIONER FOR PATENTS
Washington, D.C. 20231

Sir:

This paper is to affirm that service upon applicant and applicant's agent was inadvertently not made December 1, 1997, as stated in the aforesaid protest. However, service has been effected this date December 2, 1997, by forwarding by air mail a copy of the protest including references cited to applicant and applicant's agent in envelopes addressed to the following: Anthony Philip Eccles, MS 424 Peachester Road, Beerwah, QLD 4519 (AU); and Pizzey and Company, Level 6, Trustee House, 444 Queen Street, Brisbane, QLD 4000 (AU). Likewise, a copy of this document was mailed to the above listed addresses.

Date: December 2, 1997

Respectfully submitted,

KLARQUIST SPARKMAN CAMPBELL
LEIGH & WHINSTON, LLP

By _____
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KJB:clh 12/1/97

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Anthony Philip Eccles

Serial No. 08/637,802

Filed: June 27, 1994

For: SILVER ALLOY COMPOSITIONS

Date: December 1, 1997

Art Unit

Examiner:

CERTIFICATE OF MAILING

I HEREBY CERTIFY THAT THIS PAPER AND THE DOCUMENTS REFERRED TO AS BEING ATTACHED OR ENCLOSED HEREWITH ARE BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE ON 12/1/97, AS FIRST CLASS MAIL IN AN ENVELOPE ADDRESSED TO: ASSISTANT COMMISSIONER FOR PATENTS WASHINGTON, D.C. 20231.

Kenneth S. Klarquist
Attorney for Applicant

PROTEST UNDER 37 C.F.R. § 1.291(a)

ASSISTANT COMMISSIONER FOR PATENTS
Washington, D.C. 20231

Sir:

This is a protest against the above identified pending application. Listed below are the patents and publications relied upon:

1) U.K. Publication No. 2 255 348, Rateau et al., 4/11/92
2) U.S. Patent No. 1,614,752, Mitchell, 1/18/27
3) U.S. Patent No. 1,643,304, Korsunsky, 9/27/27
4) U.S. Patent No. 1,720,894, Gray et al., 7/16/29
5) U.S. Patent No. 1,970,319, Kern, 8/14/34
6) U.S. Patent No. 2,052,142, Kern, 8/25/36
7) U.S. Patent No. 4,973,446, Bernhard et al., 11/27/90
8) U.S. Patent No. 5,039,479, Bernhard et al., 8/13/91

Form PTO-1449, listing these patents and publications, is also attached.

A concise explanation of the relevance of each listed item follows:

The above-mentioned US Patent Application (the "present Application") is directed to a firescale resistant, work hardenable jewellery silver alloy composition. The present Application benefits from the filing date of the International Patent Application (the "PCT Application"), 27th June, 1994 from which it is derived and claims priority from provisional Australian Patent Application No. PM2432 having a filing date of 15th November, 1993.

The search report established by the European Patent Office in connection with the corresponding European Patent Application derived from the PCT Application cited only a single document in the technical field searched, International Classification C22C. The present PCT Application was classified, *inter alia,* in C22C 5-08. We enclose herewith a copy of U.K. Patent Application No. 2 255 348 (herein referred to as D1) which was

published on 4th November, 1992, over a year before the priority date of the present Application and is therefore relevant to the patentability of the Claims of the present Application. D1 was also classified under International Classification C22C 5-08. D1 discloses a silver alloy composition having improved mechanical properties including better hardness properties and a better tensile strength than conventional silver/copper alloys.

The present Application is closely based upon the disclosure of US-A-4 973 446 (herein referred to as D2). Indeed, D2 is referred to in the present Application.

The present Application discusses a number of problems. The first two problems discussed concern the formation of firescale (attributed to oxidation of copper and other metals) and secondly the undesirable porosity of traditional silver/copper alloys. The paragraph bridging pages 1 and 2 of the PCT Application from which the present Application is derived then goes on to state that these two problems are solved by the alloys disclosed in U.S. Patent No. 5 039 479 (herein referred to as D3) and D2. The present Application then goes on to discuss a third problem, see lines 11 to 14 on page 2 of the PCT Application, that the firescale resisting alloys disclosed in D3 and D2 exhibit "poor work hardening qualities thus not achieving the mechanical strength of traditional worked .925 silver goods". The claimed invention defined in the present Application aims to provide a solution to this problem.

D2 discloses a number of firescale resistant jewellery silver alloy compositions including a composition comprising 92.5% silver, 0.5% copper, and 4.25% zinc. The only technical features of Claim 1 of the present Application not disclosed by the sterling silver alloy discussed from line 17 to line 31 of column 2 of D2 are that the jewellery silver alloy is work hardenable and that the alloy includes 0.01 - 2.5% by weight germanium.

The present Application discloses that the incorporation of a germanium content in the alloy has "surprisingly resulted in alloys having work hardening characteristics of a kind with those exhibited by conventional .925 silver alloys".

The problem facing the inventors of the subject matter of the present Application was to provide a work hardenable jewellery silver having firescale resisting properties. The firescale resisting properties were adequately provided by the silver alloy disclosed in D2. Thus, D2 which is referenced in the present Application can be considered to be the closest prior art document. A skilled person wishing to improve the mechanical and hardness properties of the silver alloy composition disclosed in D2 would turn to *inter alia* the Patent literature relating to silver alloy compositions to see if the problem had already been addressed. Dl specifically addresses the problem of mechanical and hardness properties of silver alloys. By incorporating a germanium content in a silver/copper alloy, the alloys become "easily deformable [when] cold" (see lines 9 to 10 of page 3), "have a perfect mechanical behaviour" (see lines 11 to 12, page 3) and "the presence of germanium in solid solution ensures that the alloy does not become brittle" (see lines 26 to 27 of page 3). Critically, D1 makes it clear that tests carried out on silver/copper alloys incorporating a germanium content "revealed the structural hardening function of Ge [germanium] within the crystal lattice of the silver, whilst keeping its ductility intact" (see lines 11 to 13 of page 5 of D1).

Dl makes a comparison between known silver/copper alloys and a silver/copper alloy to which a germanium content has been added. Table II of Dl sets out the improved mechanical and hardness properties achieved by alloys 3 and 4 which include a germanium content. Reference should also be made to a comparison between the test results in Table II for the annealed Alloys 3 and 4 and the results for the annealed Alloys A, B and C in the table on page 8 of the present Application.

Dl specifically teaches that the germanium content should not be more than 3% since this is the maximum amount by which germanium can be added to a silver/copper alloy whilst keeping the germanium in solid solution in the alloy.

D1 gives specific examples of silver/copper alloys incorporating a germanium content of 2% (see lines 19 to 22 of page 4), 2.5% and 1.5% (see, respectively, lines 22 to 23 of page 5). Dl discloses that the germanium content has two effects: 1) to provide a hardening function (lines 11 to 13 of page 5); and 2) to reduce "fire spots" or firestain (see lines 2 to 6 of page 4). Dl goes on to state that the firestain reduction effects of germanium are beneficial at a minimum germanium content of approximately 0.5% although a germanium content of up to 1.5% is preferred. Thus, Dl discloses that the addition of a germanium content of up to 3% to a silver/copper alloy improves the mechanical properties of the silver/copper alloy.

A skilled person starting from the closest prior art document, D2, referred to in the present Application would inevitably be led to consider the disclosure of D1 which is classified in exactly the same International Classification. Upon reading Dl and discovering that germanium improves the mechanical properties of silver/copper alloys, the skilled person would understand that they would achieve a silver/copper alloy having improved mechanical properties over the alloys in D2 since this is exactly the thrust of the disclosure of Dl. Thus, the skilled person would be led to arrive at the claimed invention simply by adding germanium in the specified amount to the silver alloy composition disclosed in D2.

The claims of the present Application, if of the same scope as those in International Patent Application No. PCT/AU94/00351, simply comprise the features of:

1) a firescale resistant jewellery silver alloy disclosed in D2; and

2) a content of germanium to improve the mechanical properties of the fire scale resistant alloy.

It is known from D1 that the addition of a germanium content improves the mechanical properties of silver/copper alloys. Accordingly, the subject matter of such claims of the present Application would be obvious to a person skilled in the art and therefore lack the inventive step required.

The same conclusion that such a claimed invention of the present Application lacks an inventive step is inevitably reached by taking D1 as the closest prior art document. The only difference between the disclosure of D1 and such a claimed invention of the present Application is the inclusion in such a claim in the present Application of the requirement for a specific content of a firescale resisting additive selected from one or a mixture of zinc and silicon. As described in D2, the deoxidants silicon and zinc serve to reduce firescale.

Accordingly, the skilled person in the art reviewing the disclosure of D1 and wanting to reduce firescale would consider it obvious to incorporate a zinc and/or silicon content to the silver/copper alloy disclosed in D1 to render the silver/copper alloy more firescale resistant.

D1 does not specifically disclose a germanium content which is less than 0.5% (the lowest germanium content specified in D1). However, D1 states that it is only the firestain reduction effects of germanium which are not effective at a germanium content of less than 0.5%, and it is clear that germanium performs a "structural hardening function within the crystal lattice of the silver whilst keeping its ductility intact". Thus since it is known from D1 that the addition of a germanium content improves the mechanical and hardness properties of silver/copper alloys and there is no surprising additional effect associated with the selection of a germanium content of between 0.01% and 0.5% this selection cannot be considered inventive.

It is noted that the amended Claim 1 received by the PCT Receiving Office on 21st July 1995 adds subject matter to the present Application. The originally filed main claim specifically recited the feature that silver was present in the alloy from about 80 to 99.0% by weight. Claim 1 presently on file is silent as to the percentage of silver and can therefore be construed to include any desired silver content such as for example 70%. The removal of the essential feature that the silver content is between 80 to 99.0% therefore adds subject matter to the Application as originally filed since the main claim could now be construed as including a silver content of less than 80%. Such a low silver content was not disclosed in the Application document as originally filed.

It should also be appreciated that there are a large number of references which discuss the use of silicon and/or zinc in silver alloys to increase tarnish resistance, it being well understood by a person skilled in the art that a reduction in tarnishing will result in more resistance to firescale. Examples of such references material to the patentability of the claims of the present Application are given below:

Year	Inventor	Document
1927	W. Mitchell	US 1,614,752
1927	M. Corson	US 1,643,304
1928	D. Gray et al.	US 1,720,894
1933	E. Kern	US 1,970,319
1936	E. Kern	US 2,052,142

In summary, it is not apparent how claims pending in US Patent Application Serial No. 08/637,802, if of the same scope as those in the published PCT Application, can be considered to be inventive over the above identified material and such claims should therefore be rejected.

A copy of each listed patent or publication or other item of information in written form is attached.

Service of a complete copy of these papers was made by depositing copies of these papers with the United States Postal Service on December 1, 1997, each with sufficient postage as first class mail in envelopes addressed to the following: Anthony Philip Eccles,

MS 424 Peachester Road, Beerwah, QLD 4519 (AU); and Pizzey and Company, Level 6, Trustee House, 444 Queen Street, Brisbane, QLD 4000 (AU).

Please acknowledge receipt of this protest by stamping and returning the attached self-addressed postcard.

Date: December 1, 1997

Respectfully submitted,

KLARQUIST SPARKMAN CAMPBELL LEIGH & WHINSTON, LLP

By _____
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Registration No. 16,445

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